REMARKS

Applicants have amended the claims in order to more particularly define the invention taking into consideration the outstanding Official Action. Claim 2 has been amended to more particularly define the invention. This amendment specifies that in transplanting a host organism with a cell composition, the cell composition is prepared from an isolated host cell population of mature, healthy lymphocytes obtained from blood of said host organism when non-diseased. This amendment is fully supported by Applicants' specification as originally filed and as would be appreciated by one of ordinary skill in the art to which the invention pertains. See for example, pages 16 to 19 of the specification. Applicants most respectfully submit that all the claims now present in the application are in full compliance with 35 U.S.C. §112 and are clearly patentable over the references of record.

The rejection of claims 2, 4-9, 14 and16 under 35 U.S.C. 102(b) as being clearly anticipated by Idant Laboratories Personal Blood Storage Brochure as evidenced by the Feldschuh letter has been carefully considered but is most respectfully traversed. Applicants most respectfully submit that it would be appreciated by one of ordinary skill in the art that claim limitations of the rejected claims are no met by the teachings of the reference.

Applicants wish to direct the Examiner's attention to MPEP § 2131 which states that to anticipate a claim, the reference must teach every element of the claim.

> "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed.Cir. 1990).

The Idant Laboratories brochure itself makes no mention of whether whole blood or whether one or more components of blood are stored. Thus, from this document alone, it cannot be ascertained whether or not the blood that was stored by Idant Laboratories included T lymphocytes, a claim limitation.

The Feldschuh letter states that:

"Daxor has been advertising **whole** blood storage since 1985"

and

"The concept of storing **whole** blood, therefore, is at least 20 years old".

However, the Safe Blood article cited by the Examiner (Feldschuh 1990) in a separate rejection and of record, indicates that the term "whole blood" is not being used in this context as referring to the form in which blood naturally occurs in the body, i.e. with all of its constituent parts (including T lymphocytes). The Examiner's attention is particularly directed to the following:

"Both the blood plasma, which contains the clotting factors, and the cellular components - **chiefly the red cells** - can be effectively frozen" (page 153, lines 5-6);

"Frequently, however, **only the red cells** are initially replaced by transfusion" (page 153, lines 26-27);

"This particular patient, who received two pints of **whole blood** (two units apiece of **red cells** and **plasma**) ...".

It can be seen from the last reference above in particular that the term "whole blood" is being used by the author (Feldschuh) as referring to a combination of **red blood cells plus plasma**.

The above interpretation is explained by and is consistent with the disclosures of EP-A-0668013 (cited as document D5 in the IPER). In the "Relevant Art" section of

EP-A-0668013 (page 2), it is stated that **white blood cells are routinely removed from blood preparations** prior to storage, i.e.

> "... blood drawn from the donors is centrifuged and separated in order to **remove** plasma and **the buffer coat** [which contains the white blood cells - see page 30, lines 36-37, of the current application] thereby producing concentrated **red blood cells** possessing a hematocrit value of 55~90%" (page 2, lines 29-31).

The above statement is exemplified by the Examples of EP-A-0668013 which refer almost exclusively to concentrated red blood cell fractions from which the white blood cells have been removed.

Thus whilst the Feldschuh letter might prima facie appear to disclose the long term storage of blood which includes T lymphocytes, it can be seen from the above that it was standard practice in the art, and as would be appreciated by one of ordinary skill in the art, to remove lymphocytes from red blood cells before storage; and hence it appears that the term "whole blood" referred to by Feldschuh in his letter should be interpreted as encompassing only the red blood cell fraction in combination with the plasma fraction.

Furthermore, claim 2 has now been amended to refer to the transplantation of "... **an isolated** host cell population of mature, healthy lymphocytes obtained from blood ...". None of the Feldschuh letter, the Feldschuh (1990) paper or the Idant brochure disclose the storage of such an "isolated" population of T lymphocytes. Thus the features of claim 2 are novel over the disclosures of the aforementioned documents. Since claims 4-9, and 14-16 are all dependent, directly or indirectly, on claim 2, the latter claims are novel also. Accordingly, it is most respectfully requested that this rejection be withdrawn.

The rejection of claims 2, 4-9, 14, 16 and 21 under 35 U.S.C. 102(b) as being clearly anticipated by Feldschuh (1990) has been carefully considered but is most respectfully traversed, essentially for the reasons stated above.

In particular, Feldschuh (1990) does not disclose the storage of an "isolated" population of T lymphocytes, as claimed in currently-amended claim 2. Thus the features of claim 2 are novel over the disclosures of Feldschuh (1990) as discussed

above. . Since claims 4-9, 11, 14-16 and 21 are all dependent, directly or indirectly, on claim 2, the latter claims are novel also. Accordingly, it is most respectfully requested that this rejection be withdrawn.

The rejection of claim 11 under 35 U.S.C. 103(a) as being unpatentable over the Idant Laboratories Personal Blood Storage Brochure or Feldschuh in view of U.S. Patent 5,876,321 has been carefully considered but is most respectfully traversed.

It should first be noted that the emphasis of both the Idant Brochure and Feldschuh (1990) is squarely on eliminating the possibility of infectious agents being transferred from a third-party blood donor to the recipient of the blood. As such, these documents do not address the issue which is the subject of the presently claimed invention, i.e. the use of autologous T lymphocytes for therapeutic purposes. Consequently, both the Idant Brochure and Feldschuh (1990) relate to a different field of technology to the subject matter of the current invention; and one which would not have been considered by the relevant person skilled in the art.

It has been shown above that neither the Idant Brochure nor Feldschuh (1990) would be interpreted by the person skilled in the art as teaching the long term freezing of blood which comprises T-lymphocytes. As mentioned above, it was routine in the art for the buffy coat or buffy layer to be removed from blood before it was stored for long periods of time. Furthermore, neither the Idant Brochure nor Feldschuh (1990) make any mention whatsoever of the long-term storage of T-lymphocytes. It is clear therefore that there is no teaching or suggestion in either of these documents towards the subject matter of the current invention.

Additionally, the Feldschuh letter states that:

> "[Idant Laboratories] is still one of the very few companies willing to provide this service because it has never been profitable".

Feldschuh (1990) states that:

> "The American Red Cross, despite publicly frowning on frozen autologous blood, ..." (page 152, last two lines).

It can be seen from the above comments that, not only was there no teaching or suggestion in the cited prior art documents towards the subject matter of the current invention, but that the evidence shows that alleged experts in the field and respected charities have acknowledged that the freezing of autologous blood was not an area which was being actively pursued.

Importantly, there is no suggestion whatsoever in the Idant Brochure, Feldschuh (1990) or the Feldschuh letter towards the storage of isolated host cell populations of mature, healthy lymphocytes for subsequent therapy. Consequently, there would have been no motivation on the person skilled in the art to combine the disclosures of any of these documents with other prior art documents.

With regard to US Patent No. 5,876,321, the Examiner has asserted that this document teaches the freezing of autologous white blood cells for later use in the treatment of cancer. However, as pointed out in the Applicants' previous amendment filed February 8, 2005 (passage spanning pages 6-7), US 5,876,321 refers to organisms which are **already diseased**; and US 5,876,321 makes no specific disclosure of the advantages to be gained in the transplantation of a host organism with **healthy mature** lymphocytes.

Consequently, it is most respectfully submitted that the subject matter of the current claims cannot be said to be obvious in the light of a combination of a first set of documents which make no reference to lymphocytes or the long-term storage thereof; and a second document which refers only to organisms which are already diseased.

Additionally, the Examiner is respectfully reminded of the disclosures of WO89/04168 (as mentioned on page 6 of the Applicant's amendment of February 8, 2005) which specifically teaches away from the use of mature, healthy lymphocytes, as currently claimed. Reference is made in particular to the following:

> "... the use of **neonatal** cells for hematopoetic reconstitution according to the present invention provides distinct advantages over the employment of **adult** peripheral blood" (WO89/04168 page 22, line 33, to page 23, line 2).

The Examiner accepted the teachings of the above document as directing the skilled person away from the use of **mature** healthy lymphocytes. Clearly, the teachings of the secondary reference does not overcome the deficiencies of the primary reference. Accordingly, it is most respectfully requested that this rejection be withdrawn.

The rejection of claims 11 and 15 under 35 U.S.C. 103(a) as being unpatentable over the Idant Laboratories Personal Blood Storage Brochure or Feldschuh in view of Abe et al. (1996) has been carefully considered but is most respectfully traversed.

The Applicant's comments regarding the relevance of the Idant Laboratories personal blood storage brochure (the "Idant Brochure") or Feldschuh have been given above. In particular, it has been shown that there was no teaching or suggestion whatsoever in these documents towards the storage of isolated host cell populations of mature, healthy lymphocytes for subsequent therapy. Consequently, there would have been no motivation on the person skilled in the art to combine the disclosures of any of these documents with other prior art documents.

Abe et al. (1996) refers to the use of CTLs from murine B16 melanomas. It makes no reference whatsoever to the obtaining of mature healthy lymphocyte cells from a host organism when non-diseased and the subsequent autologous transplantation of a host organism with such cells. As such, Abe et al. (1996) relates to an entirely different field of technology to the current invention and hence it would not have been considered by the relevant person skilled in the art.

Consequently, it is most respectfully asserted that the subject matter of the current claims cannot be said to be obvious in the light of a combination of a first set of documents which make no reference to lymphocytes or the long-term storage thereof; and a second document which refers merely to experiments involving the antitumour effects of *in vitro* engineered CTLs. Accordingly, it is most respectfully asserted that this rejection be withdrawn.

In view of the above comments and further amendments to the claims, favorable reconsideration and allowance of all of the claims now present in the application are most respectfully requested.

Respectfully submitted,

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